



in men and women and is associated with poor quality of life. Therefore, the study of this problem in the framework of treatment and prevention remains relevant in modern gastroenterology.

The aim of the work was to improve the quality of pharmacotherapy of patients with GERD by conducting a pharmacoeconomic analysis of the use of proton pump inhibitors and propulsive agents with the improvement of the order of formation of the local form of treatment and preventive institutions. The materials and objects of the study are GERD based on 123 medical records of inpatients and medical prescription sheets of the Chernivtsi medical institutions.

The analysis was carried out on the basis of medical records of inpatients and medical records of medical institutions. According to the research, the group of antisecretory agents and peristalsis stimulants were the most widespread drugs. To perform pharmacoeconomic studies, an indicator of treatment effectiveness was found. It was estimated that combinations proved to perform the best, as the performance indicators for Nolpaza + Itomed and Esolong + Itomed were almost the same - 0.87 and 0.88 respectively. Nolpaza + Itomed (elimination of the heartburn problem after 9.6 days) and Ezolong + Itomed (heartburn disappeared after 10.3 days) demonstrated the best effectiveness in eliminating heartburn.

As the clinical efficacy of the Esolong + Itomed and Nolpaza + Itomed treatment regimens is approximately the same, we conducted a pharmacoeconomic analysis of the cost minimization. Comparing the data, it is noticeable that the cost of treatment with the drugs is almost the same - "Ezolong + Itomed" was 33.75 UAH, and "Nolpaza + Itomed" 30.58 UAH. Whereas the cost of therapy regimen of "Esolong + Itomed" is worth more (472,51 UAH) than the cost of pharmacotherapy "Nolpaza + Itomed" (428,12 UAH). Therefore, according to the results of clinical and economic analysis of the "cost minimization" from the economic point of view, the combination "Nolpaza + Itomed" is optimal, and in terms of efficiency, it is still significantly ahead of other schemes of pharmacotherapy of GERD. Therefore, these drugs are a matter of choice in the treatment of this disease.

Therefore, the data obtained is viable for further research and revision of the local forms of treatment and prevention facilities to include these drugs in the group of antisecretory and propulsive agents.

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## **CHARACTERISTIC OF LIPID LEVELS IN PATIENTS WITH DIABETIC NEPHROPATHY AND HYPERTENSION**

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One of the most serious microvascular complications of diabetes mellitus (DM) is diabetic nephropathy (DN). The occurrence of diabetic nephropathy in type 2 diabetes patients is 55%. Renal damage occurs in DM and causes or intensifies the progression of hypertension, finally resulting in the development of chronic kidney failure. Dyslipidemia is one of the risk factors for DN development. Low-density lipoproteins (LDL) are conjugated and oxidized by mesangial cells, stimulating proliferation of mesangium and development of glomerulosclerosis. In addition, lipoproteins filtrated through the glomeruli accumulate in the tubules and induce tubular-interstitial inflammatory processes, as well as an interstitial sclerosis, causing progression of chronic kidney disease (CKD) and development of kidney failure. Therefore, diabetic dyslipidemia is characterized by an increased concentration of TG, LDL cholesterol and decreased concentration of HDL cholesterol.

84 patients with type 2 diabetes mellitus aged from 47 to 75 with the duration of the disease for 10-15 years were examined at the Department of Nephrology of the Regional Clinical Hospital of Chernivtsi. All the patients were distributed between two groups: I group included 43 patients with I degree CKD and IV degree DN, II group included 41 patients with II degree CKD and IV degree DN. Every group was divided into subgroups (with and without I or II degree arterial hypertension (AH)). The control group included 19 conditionally healthy individuals. Patients in all



the groups were distributed according to the age and sex. Total cholesterol (TCS), triglycerides (TG), high-density lipoproteins (HDL), low-density lipoproteins (LDL) in the blood plasma were determined in all the patients. The obtained data were statistically processed. Informed consent was obtained from all participants.

The analysis of clinical-laboratory findings of the examined patients revealed the disorders of the lipid metabolism in the blood serum: significant increase in the TCS, TG, and LDL levels respectively ( $p < 0.05$ ) against the background of decreased HDL levels compared to conditionally healthy individuals. At the same time, severe imbalance of the lipid metabolism was found in patients with DN, II degree CKD and II degree AH.

More severe lipid imbalance was found among women than among men. A considerable increase of LDL was shown to be found both among men and women with DN against CKD II degree ( $p < 0.05$ ). Therefore, a considerable lipid imbalance in patients with DN against CKD I-II degrees and AH II degree was found among all the patients with a probable gender difference especially in case of CKD II degree. Thus, the analysis of the obtained results found that the values of lipid metabolism differed most substantially in persons of an elderly age as compared with the results of patients of a mature age, and they depend more on the stage of CKD than the degree of AH, although in elderly patients the values differ considerably according to the degree of AH. Therefore, the values of TCS were significantly higher in all the group of patients in comparison with appropriate values of healthy individuals ( $p < 0.05$ ), but it should be noted that in patients with II degree CKD and II degree AH the levels of TCS were higher than in patients with I degree CKD and I and II degree AH (according to the comparison in the age groups ( $p < 0.05$ )). The levels of TG and LDL was also considerably increased in patients with II degree CKD and II degree AH in comparison with other groups of the study ( $p < 0.05$ ). The level of HDL decreased in all the patients with DN against the background of CKD I-II degrees ( $p < 0.05$ ), but it was the lowest in all the patients with II degree CKD with I and II degree AH.

Thus, in significant gender differences of lipid imbalance are found in patients with IV degree diabetic nephropathy against the background of I-II degree chronic kidney disease and II degree hypertension with their prevailing among women. Lipid imbalance is most pronounced in elderly patients, which is confirmed by a significant increase of low-density lipoproteins level.

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**THE STUDY OF POPULUS SIMONII (SIMON POPLAR)  
TOXIC INFLUENCE ON RATS' ORGANISM**

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One of the main tasks of modern medicine and pharmacy is to find and create new herbal medicines. The main advantages of phytotherapeutic drugs are a wide range of pharmacological activities, the possibility of use in chronic diseases, high bioavailability, a limited range of side effects and low toxicity.

An important characteristic in the process of a potential drug research in addition to the therapeutic properties examination is studying  $LD_{50}$  index, which characterizes the degree of drugs toxicity, the range of their pharmacological effects, and also enables to evaluate the examined substance danger to the body in the short-term action.

To determine  $LD_{50}$  and simulate the clinical manifestation of acute poisoning, acute toxicity of Simon poplar leaf extract was studied in white adult lab rats with the body weigh 180-200 g. The animals of the control group were given an equivalent volume of 1% starch suspension. The period of the animals monitoring was 14 days, during which their appearance, the skin condition, the dynamics of body weight, mortality were evaluated, and after the animals were removed from the experiment, macroscopic evaluation and determination of the mass coefficients of the internal organs were performed.